

ABSTRACT

A hologram recording and reproducing system having compatibility has: a supporting unit for freely attachably supporting a recording medium including a photosensitive material; a signal light-generating unit for projecting a coherent light beam modulated according to a predetermined data into a recording medium and generating a diffraction grating by providing a three-dimensional light interference pattern in the recording medium; a detector unit for detecting and photoelectrically converting a diffracted light from the diffraction grating; and a demodulating unit for demodulating a predetermined data from an output from the detector unit. The detector unit has an intermediate data-generating unit for generating an intermediate data, and the demodulating unit has a conversion table in which the intermediate data and the predetermined data are uniquely associated, and demodulates the predetermined data by performing a computation based on a correlation in the conversion table.